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IS 4536-2 (1969): Composite Bottom Stainless Steel Cooking Utensils - Part II : 3-ply Construction [MED 33: Utensils, Cutlery and Domestic Hardware]



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Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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IS:4536 (Part II) - 1969
REAFFIRMED

Indian Standard
SPECIFICATION FOR
COMPOSITE BOTTOM STAINLESS STEEL
COOKING UTENSILS
PART II 3-PLY CONSTRUCTION

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INDIAN STANDARDS INSTITUTION
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 1

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August 1969

**AMENDMENT NO. 2 SEPTEMBER 2007
TO
IS 4536 (PART 2) : 1969 SPECIFICATION FOR
COMPOSITE BOTTOM STAINLESS STEEL
COOKING UTENSILS**

PART 2 3-PLY CONSTRUCTION

[Page 4, clause 2.1 (see also Amendment No 1) — Substitute the following for existing clause:

‘2.1 The material used for manufacture of two outer plies of these utensils shall be stainless steel conforming to designation 07Cr18Ni9 or 04Cr18Ni11 of IS 1570 (Part 5) . 1985† and the material for the core shall be low carbon steel or copper conforming to grades FRTP1 or FRTP2 of IS 191 : 1980‡ or aluminium conforming to IS 21 : 1992§.’

(Page 4, footnotes ‘†’ and ‘‡’ marks) — Substitute the following for the existing:

†Schedules for wrought steels Part 5 Stainless and heat-resisting steels (*second revision*)

‡Specification for copper (*third revision*)

(Page 4, footnotes) — Insert the following footnote at the end:

§Wrought aluminium and aluminium alloys for manufacture of utensils — Specification (*fourth revision*)

Indian Standard

SPECIFICATION FOR COMPOSITE BOTTOM STAINLESS STEEL COOKING UTENSILS

PART II 3-PLY CONSTRUCTION

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(Continued on page 2)

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IS:4536 (Part II) - 1969

(Continued from page 1)

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Indian Standard
**SPECIFICATION FOR
COMPOSITE BOTTOM STAINLESS STEEL
COOKING UTENSILS**

PART II 3-PLY CONSTRUCTION

0. FOREWORD

0.1 This Indian Standard (Part II) was adopted by the Indian Standards Institution on 9 June 1969, after the draft finalized by the Utensils Sectional Committee had been approved by the Consumer Products Division Council.

0.2 The work of formulating standards on composite bottom stainless steel cooking utensils has been taken up in order to lay down in precise terms the requirements expected of these utensils. These utensils have a combination of two or more better heat-conducting metals than stainless steel for increasing the thermal conductivity uniformly all over the area and are now being produced in the country. Part I of this standard covers the requirements of copper electrodeposited composite bottom stainless steel cooking utensils, while this part covers composite bottom stainless steel cooking utensils of 3-ply construction which is a sandwich of stainless steel inseparably bonded to an inside core of heat-conductive low-carbon steel or copper. 3-Ply construction is designed to provide all the advantages of durability, cleanliness, corrosion resistance and sanitation offered by stainless steel plus the superior heat conductivity of low carbon steel or copper.

0.3 The shapes and sizes demanded in the country differ from area to area and therefore, need not rigidly be tied down. For the general run of the utensil uses, the shapes and sizes covered in this standard are recommended (see also 3.1).

0.4 This standard contains clauses 3.2 and 6.1 which call for agreement between the purchaser and the supplier and which permit the purchaser to use his option for selection to suit his requirements.

0.5 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance

IS:4536 (Part II) -1969

with IS:2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard (Part II) lays down the requirements of 3-ply construction composite bottom stainless steel cooking utensils, namely, frying-pans and saucepans.

2. MATERIALS

2.1 The material used for the manufacture of two outer plies of these utensils shall be stainless steel conforming to Designation 07Cr 19Ni9 of Schedule V of IS:1570-1961† and the material for the core shall be low-carbon steel or copper conforming to Grades FRTP1 or FRTP2 of IS:191-1967‡.

2.2 Rivets, lugs and other fittings used on the body of the utensil shall be made of stainless steel.

2.3 The fittings used to secure handle with the lug shall be made either of corrosion resisting material or non-ferrous material suitably plated.

2.4 The handle shall be made of impact-resistant and non-inflammable plastics.

3. SHAPES AND DIMENSIONS

3.1 Popular shapes and dimensions of utensils are given in Fig. 1 and 2. Nominal thickness of sheets and permissible reduction therefrom shall be as given in respective figures.

3.2 The low-carbon steel or copper core shall be clad with stainless steel of equal thicknesses on each side. The proportion of thickness of core and cladding to total thickness shall be as agreed to between the purchaser and the supplier.

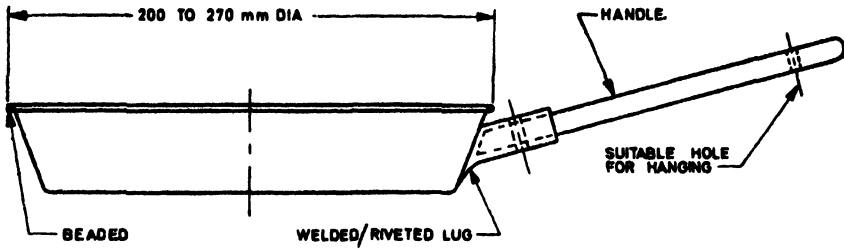
4. FINISH

4.1 The utensils shall have no sharp edges and shall be finished bright all over. The construction shall be such that it is possible to clean the utensils thoroughly and all surfaces for cleaning are accessible by hand or brush. The utensils shall be free from distortion, dents, wrinkles, scratches, pittings, deep tool marks and other surface defects. The handles of the frying-pans and saucepans shall be suitably fitted.

*Rules for rounding off numerical values (revised).

†Schedules for wrought steel for general engineering purposes.

‡Specification for copper (revised).



THICKNESS OF
3-PLY SHEET

mm

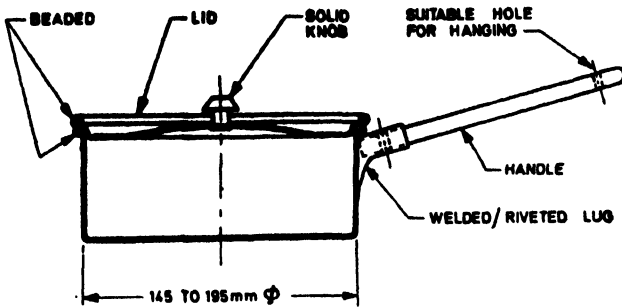
1.25

MAXIMUM PERMISSIBLE
REDUCTION IN THICKNESS

mm

0.20

FIG. 1 FRYING-PAN



THICKNESS OF
3-PLY SHEET

mm

1.25

MAXIMUM PERMISSIBLE
REDUCTION IN THICKNESS

mm

0.20

FIG. 2 SAUCEPAN

5. MARKING

5.1 Each utensil shall be indelibly marked with the manufacturer's name, registered trade-mark or identification mark. The impression of the marking shall not show up on the inside.

IS : 4536 (Part II) - 1969

5.1.1 The utensils may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act, and the Rules and Regulations made thereunder. Presence of this mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard, under a well-defined system of inspection, testing and quality control during production. This system, which is devised and supervised by ISI and operated by the producer has the further safeguard that the products as actually marketed are continuously checked by ISI for conformity to the standard. Details of conditions, under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

6. PACKING

6.1 Utensils shall be wrapped in soft tissue paper and packed in accordance with the best trade practice or according to the instructions of the purchaser. Care shall be taken to see that the utensils do not get dented during transit.

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AMENDMENT NO. 1 MARCH 1985

TO

IS:4536(Part 2)-1969 SPECIFICATION FOR COMPOSITE
BOTTOM STAINLESS STEEL COOKING UTENSILS

PART 2 3-PLY CONSTRUCTION

(Page 4, clause 2.1) - Substitute the following
for the existing clause:

'2.1 The material used for the manufacture of two
outer plies of these utensils shall be stainless steel
conforming to Designation 07Cr18Ni9 or 04Cr18Ni11 of
IS:1570(Part 5)-1972[†] and the material for the core
shall be low-carbon steel or copper conforming to
Grades FRTP1 or FRTP2 of IS:191-1967[‡].'

(Page 4, foot-notes with '†' and '‡' marks) -
Substitute the following for the existing titles:

[†]Schedules for wrought steels: Part 5 Stainless
and heat-resisting steels(*first revision*).

[‡]Specification for copper (*second revision*).'

(CPDC .5)